

*If you are using a printed copy of this procedure, and not the on-screen version, then you **MUST** make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A*

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.120.4.a 4 O’Clock (PEER 9) Critical Device & Permit Link Tests From MCR

C-A-OPM Procedures in which this Attachment is used.		
4.120.4		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
_____	_____	_____	_____
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Approved: _____
 Collider-Accelerator Department Chairman _____

 Date

V. Castillo

4.120.4.a 4 O’Clock (PEER 9) Critical Device & Permit Link Tests From MCR

PASS ANNUAL ACCEPTANCE TEST PROTOCOL

Division A Software Filename and Checksum: Title:_____ **Checksum:** _____

Division B Software Filename and Checksum: Title:_____ **Checksum:** _____

Initial testing complete:

Test Team Leader’s Name (Print): _____ **Life Number:** _____

Test Team Leader’s Name (Sign): _____ **Date:** ____/____/____

Acceptance test procedure complete (following repairs and retesting if required):

Test Team Leader’s Name (Print): _____ **Life Number:** _____

Test Team Leader’s Name (Sign): _____ **Date:** ____/____/____

Test results reviewed by:

Safety Section Head’s Name (Print): _____ **Life Number:** _____

Safety Section Head’s Name (Sign): _____ **Date:** ____/____/____

Test results accepted by Radiation Safety Committee:

RSC Member’s Name (Print): _____ **Life Number:** _____

RSC Member’s Name (Sign): _____ **Date:** ____/____/____

1.1 Setup to test the Critical Devices and Permit Link response to a loss of PASS enable.

- | | | | |
|--------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <input type="checkbox"/> | VERIFY | The RF Transfer Key is in the Key tree at | MCR |
| <input type="checkbox"/> | VERIFY | CD Key switch is set for | XY ARC |
| | PLACE | Peer 9 in Mode 16 | |
| <input type="checkbox"/> | VERIFY | Peer 9 is in Controlled Access | MODE 16 |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3 , on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | DISABLED |
| | CLOSE | Peer 9 gate: 5GS1 | |
| | RESET | Peer 9 gates: 3GI1, 3EL1, 4GE1, 4GE2, 4MD1, 4MD2, 4GI1, 4GE3, 4EL1, 4ED1 | |
| <input type="checkbox"/> | VERIFY | Peer 9 gates: <input type="checkbox"/> 3GI1, <input type="checkbox"/> 3EL1, <input type="checkbox"/> 4GE1, <input type="checkbox"/> 4GED2, <input type="checkbox"/> 4MD1, <input type="checkbox"/> 4MD2, <input type="checkbox"/> 4GE3, <input type="checkbox"/> 4EL1, <input type="checkbox"/> 4ED are | RESET |
| | SWEEP | Peer 9 Zones: 4Z1, 4Z2 | |
| <input type="checkbox"/> | VERIFY | Peer 9 Zones: <input type="checkbox"/> 4Z1, <input type="checkbox"/> 4Z2 are | SWEPT |
| | PLACE | Peer 9 in Mode 24 | |
| <input type="checkbox"/> | VERIFY | Peer 9 is in No Access | MODE 24 |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | ENABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| | SET | RHIC prmry BS command | OUT |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3 , on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ENABLED |
- ☐ **Check for acceptance of Setup to test the Critical Devices and Permit Link response to a loss of PASS enable**

1.2 Test of Critical Devices and Permit Link response to loss of PASS enable from RHIC Key Tree

- | | | | |
|--------------------------|-----------------|--------------------------------------------------------------------------------------------------------|-----------------|
| <input type="checkbox"/> | VERIFY | Peer 9 is in No Access | MODE 24 |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | ENABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | RHIC prmry BS command is set | OUT |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3, on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ENABLED |
| <input type="checkbox"/> | TURN OFF | Any key in the RHIC Key Tree | |
| <input type="checkbox"/> | VERIFY | MCR sees Peer 9 go to | MODE 2 |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3, on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | DISABLED |
- ☐ **Check for acceptance of Test of Critical Devices and Permit Link response to loss of PASS enable from RHIC Key Tree**

1.3 Test of Critical Devices and Permit Link response to loss of PASS enable from RHIC RF Key Tree

- | | | | |
|--------------------------|---------------|-----------------------------------------------------------------------------------------------------|-----------------|
| <input type="checkbox"/> | PLACE | Peer 9 in Mode 24 | |
| <input type="checkbox"/> | VERIFY | Peer 9 is in No Access | MODE 24 |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | ENABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | SET | RHIC prmry BS command | OUT |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |

- | | | | |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------|
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3 , on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ENABLED |
|
 | | | |
| | TURN OFF | Any key in the RHIC RF Key Tree | |
| <input type="checkbox"/> | VERIFY | MCR sees Peer 9 go to | MODE 2 |
|
 | | | |
| <input type="checkbox"/> | VERIFY | MCR sees RF CDs on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RF inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
|
 | | | |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. Pri. CD on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Inj. inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
|
 | | | |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring CD, B/S : G1, G2 and G3 , on CD page | DISABLED |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Ring inhibit Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | ON |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Reachback Latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
| <input type="checkbox"/> | VERIFY | MCR sees RF Reachback latch Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | OFF |
|
 | | | |
| <input type="checkbox"/> | VERIFY | MCR sees RHIC Permit Link Div A <input type="checkbox"/> and Div B <input type="checkbox"/> | DISABLED |
|
 | | | |
| | PLACE | Peer 9 in Mode 16 | |
| <input type="checkbox"/> | VERIFY | Peer 9 is in Controlled Access | MODE 16 |
|
 | | | |
| | PLACE | Peer 9 in Mode 8 | |
| <input type="checkbox"/> | VERIFY | Peer 9 is in Restricted Access | MODE 8 |
|
 | | | |
| <input type="checkbox"/> | Check for acceptance of Test of Critical Devices and Permit Link response to loss of PASS enable from RHIC RF Key Tree | | |

END OF TEST PROCEDURE

TTL: Sign for completion of initial testing: _____

Date: ____/____/____

TTL: Sign for completion of final testing: _____

Date: ____/____/____